AVESF

From: "Hall, Steven G." <SGHall@ene.com>
To: <liverman.earl@epamail.epa.gov>
Sent: Friday, August 03, 2012 2:34 PM
Subject: additional information about the 1994 pump and treat system

Earl –

Here are some excerpts from some of the Potlatch/Hart Crowser performance reports for the GW pump and treat system operated from 1994-2000. Let me know if you would like additional information or scans of any of the reports.

Thanks,
Steve

General comments:
-- Throughout this period, Hart Crowser monitored the performance of the pumps and GW elevations, and they made several adjustments of the depths of the pumps to try to maintain the cone of depression. They also stopped pumping from one of the extraction wells when monitoring indicated no more free product. In hindsight, I wonder if the absence of free product in these recovery wells is similar to what was observed (or not observed) in the collection wells for the 2000 containment system.

1996
There are a couple of reports where they indicate that some of the pumps in the extraction wells were not operating for periods of time. There is little discussion provided, although one report does indicate that "complete trench containment was not observed..."

August 29, 1997
"The entire system seemed to be working properly for this monitoring event. [...] Though the system was not maintaining absolute containment, the depression in the groundwater level does seem to be collecting the free product. This is based on no free product escaping to the river."

January 21, 2000
"Though the extraction system was running and maintaining a trough for free product to capture, it was not maintaining absolute capture. During normal operation the bottom of the trough created by the pumping system is lower than the river elevation. During periods of low river flow it is normal for the river elevation to be less than the trough bottom. This monitoring event is the first time, when the system was operating properly, that we have seen the river level lower than the trough during the "wet" season. [...] The pumping system is not able to depress the groundwater level as fast as the river fluctuates. The effect of this is that the oil that was already past the treatment trench has a tendency to flow toward the river instead of the trench. The oil is then captured in the oil booms along the river bank."

March 8, 2000
"High groundwater flows in the spring and winter caused temporary upsets to the operation of the free product recovery system. Spring runoff from abnormally deep snow pack and winter rains temporarily over-loaded the groundwater system. The extraction well pumps were not able to pump enough groundwater to maintain capture zones near the St. Joe River."
[Steve: It continues on about how they don't think these events negatively affected the performance overall, but there is no additional information or data about what these upsets were or how they knew that they happened.]

"Though we believe that the current system maintains control of upgradient free product, it is unable to pull back the free product that is downgradient of the extraction trench."

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